In The Claims:

Claim 1. (currently amended) [[A]] An isolated biopolymer marker ~~peptide~~ consisting of ~~amino acid residues 2-12 of~~ SEQ ID NO: 1 ~~diagnostic for myocardial infarction~~.

Claims 2-35 (previously canceled)

Claim 36. (Currently amended) A method for ~~diagnosing~~ determining the presence of an isolated biopolymer marker having SEQ ID NO: 1 ~~myocardial infarction~~ comprising:

(a) obtaining a sample from a patient;

(b) conducting mass spectrometric analysis on said sample in a manner effective to maximize elucidation of discernible peptide fragments contained therein~~,~~ and comparing mass spectrum profiles of said isolated biopolymer marker having SEQ ID NO: 1 to mass spectrum profiles of peptides elucidated from said sample; and

~~(c) comparing mass spectrum profiles of a peptide consisting of amino acid residues of 2-12 of SEQ ID NO: 1 to mass spectrum profiles of peptides elucidated from said sample, wherein recognition of a mass spectrum profile in the sample displaying the characteristic profile of the mass spectrum profile for the peptide consisting of amino acid residues 2-12 of SEQ ID NO:1 is diagnostic for myocardial infarction.~~

(c) confirming the presence of said isolated biopolymer marker having SEQ ID NO:1 in said sample displaying a peak profile at

about 1077 Da in said mass spectrum profile;

wherein the presence of said isolated biopolymer marker is indicative of a link to myocardial infraction.

Claim 37. (Previously presented) The method of claim 36, wherein the sample is an unfractionated body fluid or a tissue sample.

Claim 38. (Previously presented) The method of claim 36, wherein said sample is selected from the group consisting of blood, blood products, urine, saliva, cerebrospinal fluid, and lymph.

Claim 39. (Previously presented) The method of claim 36, wherein said mass spectrometric analysis is Surface Enhanced Laser Desorption Ionization (SELDI) mass spectrometry (MS).

Claim 40. (Previously presented) The method of claim 36, wherein said patient is a human.

Claim 41. (Currently amended) A myocardial infarction diagnostic kit comprising: (a) an isolated biopolymer ~~a peptide~~ consisting ~~of amino acid residues 2-12~~ of SEQ ID NO:1 and (b) an antibody that binds to said isolated biopolymer ~~peptide~~ in a sample from a patient.

Claim 42. (Previously presented)The diagnostic assay kit of claim 41, wherein said antibody is immobilized on a solid support.

Claim 43. (Previously presented) The diagnostic kit of claim 41, wherein said antibody is labeled.